



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,843	01/13/2006	Shigeki Mori	44471/324817	3152
23370 7590 08/11/2008 JOHN S. PRATT, ESQ. KILPATRICK STOCKTON, LLP 1100 PEACHTREE STREET ATLANTA, GA 30309				
EXAMINER ZIMMER, MARC S				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
08/11/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/564,843

Applicant(s)

MORI ET AL.

Examiner

MARC S. ZIMMER

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 12-16, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 8, 10, 11 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date 01/13/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Election/Restrictions

Applicants' election of those embodiments of their invention wherein the Lewis acid compound is boron trifluoride is noted with appreciation.

Claim Objection

The word "either" in claim 7 should be replaced with "ether". The word "complex" in claim 19 should be replaced with "complex".

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4, 6-7, 12-14, 16, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Bigham et al., U.S. Patent # 5,723,516.

Bigham discloses a polymer binder for promoting adhesion between roofing granules and the shingles to which they are applied. The binder composition may comprise any of the three combinations of materials outlined in column 2, lines 2-44. Relevant to the present discussion, two of the binders include silane-functionalized polymers in either an inert or hydrolysable diluent. The silane-functional polymers may be selected from silyl-functional acrylic polymers (column 3, lines 38-40) and condensation polymers (column 5, lines 58-60). The catalysts include any of those listed in column 7, lines 6-28 including BF₃ etherate.

It is acknowledged that the boron trifluoride catalyst represents only one of numerous permutations of this component. However, although a genus does not always anticipate a claim to a species within the genus, when the species is clearly named, the species claim is anticipated no matter how many other species are

additionally named. *Ex parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990) (The claimed compound was named in a reference which also disclosed 45 other compounds. The Board held that the comprehensiveness of the listing did not negate the fact that the compound claimed was specifically taught. The Board compared the facts to the situation in which the compound was found in the Merck Index, saying that "the tenth edition of the Merck Index lists ten thousand compounds. In our view, each and every one of those compounds is described' as that term is used in 35 U.S.C. § 102(a), in that publication."). *Id.* at 1718.

Concerning claim 3, silicon-containing polymers with overlapping viscosities/molecular weights are summarized in Table 1, most of which are derivatized with silyl groups.

Regarding claim 13, the formula describing the alkoxysilyl-functional acrylic monomer from which the acrylic water-reactive polymer is formed clearly embraces compounds wherein there is one non-hydrolyzable group other than the acrylic moiety.

Claims 1-4, 6-7, 9, 12-14, 16, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kasa et al., JP 4-103668.

Kasa discloses vinyl polymers containing all of an epoxy group, a silyl group bearing hydrolyzable residues, and a hydroxyl group (abstract). The resin is combined with 0.1 to 30 parts of a curing catalysts per 100 hundred parts of the resin (molecular weight of 400-100,000 according to the lower right quadrant of page 3). Exemplary catalysts are those listed in the upper right quadrant of page 8 among which include

Art Unit: 1796

several Lewis acid catalysts. Boron trifluoride etherate is mentioned as one of said catalysts.

As for claims 12-14, and 16, the acrylic compound that incorporates the hydrolysable silyl group is one wherein at least one of R_{13} to R_{15} may be a non-hydrolyzable alkyl group.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bigham et al., U.S. Patent # 5,723,516.

As for claim 2, while it is appreciated that there is no anticipation of that embodiment of Applicant's invention wherein the polymer comprises polar moieties and the catalyst is a boron trifluoride, it is the Examiner's position that there is not such an incredible number of combinations of polymer and catalyst that the aforementioned combination wouldn't at least be readily envisaged (particularly since condensation polymers are explicitly disclosed at the bottom of claim 5 and the short list of polymers contemplated there is clearly not intended to be comprehensive) and, thus, claim 2 is considered prima facie obvious.

As for claim 9, though a specific quantity of the condensation catalyst is not advocated, it is inarguable that one of ordinary skill optimizes this parameter as a matter of routine experimentation.

Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasa et al., JP 4-103668. Amino-functional silanes are among the most ubiquitous adhesion promoters found in the prior art for the purpose of improving bonding interactions between a silyl-functional polymer and a substrate. Insofar as the Kasa's disclosure is directed to a coating composition comprising a silyl-functional polymer, the inclusion of an aminosilane would be obvious to the skilled artisan. "It is prima facie obvious to add a known ingredient to a known composition for its known function." *In re Lindner* 173 USPQ 356; *In re Dial et al* 140 USPQ 244.

Allowable Subject Matter

Claims 8, 10-11, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Organotin compounds are known condensation catalysts and at least Bigham mentions an organotin compound, there is no indication to add a plurality of different condensation catalysts. That is to say, were boron trifluoride etherate selected as the curing catalyst, it is not at all clear why one of ordinary skill would have been motivated to also incorporate an organotin compound.

As an aside, the ISA characterizes two other Japanese patent documents as being especially germane to the claims. The Examiner has confirmed that their disclosures are fairly similar to that of JP 4-103668 and, thus, rejection of the claims over these would be redundant. Accordingly, the Examiner has decided not to formally reject over these references at this time in the name of brevity.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC S. ZIMMER whose telephone number is (571)272-1096. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 1796

August 7, 2008

/Marc S. Zimmer/
Primary Examiner, Art Unit 1796